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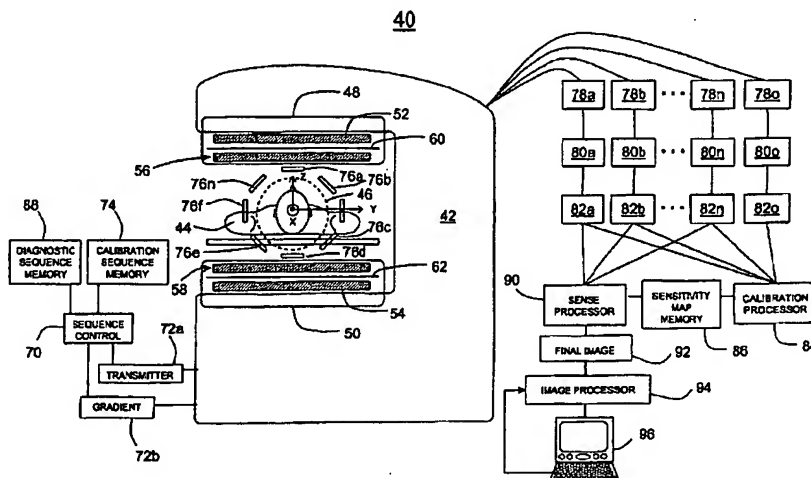
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(54) Title: **COIL SENSITIVITY ESTIMATION FOR PARALLEL IMAGING**



(57) Abstract: In a parallel or SENSE imaging technique in an MRI system (40), a calibration scan is conducted to generate a calibration image (86) indicative of sensitivity profiles of parallel imaging coils (76a,...,76n) also in the regions where the magnetic field is distorted. This is accomplished by using a phase refocusing imaging protocol such as a spin echo technique, or by using a gradient echo technique where the echo time is very short. In addition, the phase encode direction of the calibration scan and a diagnostic imaging scan shall be matched. A diagnostic imaging scan is conducted using a diagnostic scan protocol to generate a diagnostic image representation from each parallel imaging coil. A SENSE processor (90) reconstructs a final diagnostic image (92) from the diagnostic image representations and the coil sensitivity profiles.

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